

From: [Evison, Leah](#)
To: leah.evison@state.mn.us
Subject: draft to print
Date: Monday, April 28, 2014 12:01:00 PM

From Keith

To Leah

Re: Clarification of Advice re Vapor Intrusion Sampling for the General Mills Site, Minneapolis, Minnesota

On February 12, 2012 I recommended to you that US EPA's screening value of 4.3 ug/L TCE be used for screening soil gas samples at the General Mills site. I understand that currently MPCA is using 20 ug/L in soil gas (sub-slab) as a decision point for installing vapor intrusion mitigation system for homes. The difference between EPA's recommended screening level and MPCA's mitigation level has led to questions from the public about whether EPA considers MPCA's approach to be protective.

EPA recommends screening in soil gas or sub-slab gas at a 10^{-6} cancer risk level for cancer effects and a Hazard Index of 1 for non-cancer effects. TCE has both effects so EPA recommends screening at the lower of the two numbers. For TCE, this results in a recommendation to screen in soil gas or sub-slab at 4.3 ug/m³.

EPA recommends installation of vapor mitigation systems in residences if actual residential exposure inside the house exceeds EPA's cancer risk range of 10^{-4} to 10^{-6} . Exposure to TCE at a level of 43 ug/m³ would exceed this risk range.

EPA guidance recommends use of a 10-fold attenuation factor between soil gas or sub-slab and indoor air. Using this attenuation factor, MPCA's mitigation level would equate to an human exposure to TCE at a level of 2 ug/m³. This is a protective approach.

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